The Title

Please replace the Title with the following new Title:

Graphical User Interface (GUI) for Administering a Network Implementing Media Aggregation

The Specification

Please replace the paragraph spanning page 6, lines 5-6 with the following paragraph:

Figure 1 illustrates an initialization control GUI in communication with a plurality of media aggregation managers ~~Managers~~ according to one embodiment of the present invention.

Please replace the paragraph spanning page 8, lines 12-24 with the following paragraph:

Media aggregation managers are the subject of a related co-pending application having application number 09/634,035, entitled "Multiplexing Several Individual Application Sessions over a Pre-allocated Reservation Protocol Session," that is incorporated herein in its entirety by reference. As discussed in the related application, a media aggregation manager is initialized with an expected bandwidth utilization between it and another media aggregation manager. Two media ~~Media~~ aggregation managers, having pre-allocated an expected bandwidth usage between them, allow residents in a community to utilize a portion of the pre-allocated bandwidth without having to establish individual application sessions as previously required by conventional networks not utilizing media aggregation-managers. This type of pre-allocated bandwidth between media aggregation managers saves time in establishing linking protocols and saves bandwidth overhead by not requiring each VoIP connection to establish its own link and maintain its own individual link.

Please replace the paragraph spanning page 9, lines 1-12 with the following paragraph:

One benefit of the graphical user interface of the present invention is that it allows a system administrator to adjust bandwidth allocation requirements for a plurality of users communicating between a plurality of locations based on historical and current utilization demands by allowing allocation and de-allocation of bandwidth reservations between a plurality of media aggregation managers. Additionally, another advantage of the present invention is that the GUI allows a user, by selecting a path, to initialize multiple routers along the path simultaneously without having to individually provision each router. The present invention addresses the inadequacy of current network management tools by providing a GUI for discovering a VoIP network, including the media aggregation ~~aggregations~~ managers residing on the VoIP network and allowing a user, based on predicted usage requirements, to initialize the media aggregation managers and the routers included on a selected path for a predetermined schedule.

Please replace the previously amended paragraph originally spanning page 12, lines 17-22 with the following paragraph:

A "reservation protocol-session" generally refers to a set of reserved network resources, including the routers utilized for the session, established and maintained between two or more network devices that serve as proxies or gate-keepers for application endpoints residing behind the proxies. An example[[,]] of a reservation protocol session is an RSVP session between two media aggregation managers.

Please replace the paragraph spanning page 14, lines 2-14 with the following paragraph:

Figure 1 conceptually illustrates interactions between two media aggregation managers 130 and 140 according to one embodiment of the present invention. The media aggregation managers 130 and 140 act as reservation protocol proxies on behalf of the communities 150 and 160 where a plurality of residents wish to communicate with each other. For example, resident 151 may wish to communicate with resident 161 while resident 152 wishes to communicate with resident 162. The media aggregation managers pre-allocate bandwidth and establish a reservation protocol session capable of handling multiple communications between residents in community ~~Community~~ 150 and residents in community ~~Community~~ 160. Having media aggregation managers controlling a single reservation protocol session for multiple communication for residents between a plurality of communities allows for packets of communication data to be efficiently multiplexed and reduces protocol overhead as individual pairs of residents need not maintain their own application sessions.

Please replace the previously amended paragraph originally spanning page 14, line 15 - page 15, line 4 with the following paragraph:

The reservations may apply to various paths. For example, the bandwidth reservation may lay over path 110 containing one intermediary router 111 or may be allocated over path 120 containing two intermediary routers 121 and 122. The reservation for communications between community 150 and community 160 may also be split over the various paths 110 and 120 depending on the historical and current

bandwidth burden on individual routers 111, 121 and 122. The media aggregation managers reserve a protocol session and then multiplex the plurality of data packets for a plurality of communication links to be communicated. As prior technologies required each resident in a community to request an individual reservation session to establish a link between community ~~Community~~ 150 and community ~~Community~~ 160, media aggregation managers and the apparatuses and methods for initializing/controlling the media aggregation managers have been developed. Embodiments of the present invention provide a graphical user interface 100 that enables a user to interactively discover, analyze and initialize the media aggregation managers to handle a schedule of community communications.

Please replace the previously amended paragraph originally spanning page 17, line 20 - page 18, line 22 with the following paragraph:

Figure 5 shows the network map interface according to one embodiment of the invention. A graphical representation of a plurality of nodes on the discovered network is shown. In addition, links between each of the nodes and the administration GUI 550 are shown. The network map screen indicates community nodes 510, router nodes 520 and media aggregation managers 530. In the present example, each of the nodes or media aggregation nodes are visually distinct via a graphical representation indicative of the type of node. The user is able to readily identify whether a node is a community, router, media aggregation manager, & etc. simply by looking at its graphical representation. The community nodes 510 may have a plurality of residents, including but not limited to computers, routers, phones, printers, scanners and the like. Each of the nodes and the

media aggregation managers have properties associated with it that may be accessed by positioning the cursor over the graphical representation for the node and clicking on a mouse button assigned for property retrieval, in this embodiment, although not shown, the right mouse button is assigned for property retrieval. A properties window immediately appears as shown in Figure 6 indicating information about the node such as the manufacturer 610, the interface addresses 620 or a name 630. Additionally, the properties window may indicate other information about the characteristics of the current configuration of the node. For instance, the property window for a media aggregation manager may indicate how many reservation protocol sessions it is maintaining and with which other media aggregation managers each of the reservation protocol sessions relate. The property window may also indicate the available bandwidth for a given node and for what type of communication the bandwidth is available, such as voice or data communication and the amount of bandwidth that is currently allocated for reservation protocol sessions utilizing this particular media aggregation manager as a proxy or gate-keeper. Other properties may include interface command options, such as allocate bandwidth ~~540~~, de-allocate bandwidth (not shown), or other interface command options that take the user to various interface screens and option windows.

Please replace the paragraph spanning page 20, lines 17-23 with the following paragraph:

Figure 9 demonstrates what happens when the analyze button 790 is selected. In step 910, a schedule of bandwidth allocation is determined for the selected path. In step 920, after the predicted schedule for the selected path has been determined, the schedule

of increased bandwidth allocation is overlaid on top of the schedule that accounts for bandwidth previously reserved to the nodes on the path via other media aggregation managers utilizing those nodes. Finally, in step 930 ~~940~~, the combined schedule of usage is optionally displayed to the user.

Please replace the paragraph spanning page 21, lines 13 - page 22, line 2 with the following paragraph:

The media aggregation managers that have been analyzed are displayed 810. The user may indicate a time range for display by changing the offset for each router 820. Another segment of the display 830 indicates to the user all available and analyzed nodes between the selected media aggregation managers by way of a scrollable list of intervening nodes. The user may then select a node on the path and a schedule of utilization for that node appears 840. ~~The schedule.~~ The schedule depicts a time frame including a Start Time 850 and End time 860 and indicates the bandwidth utilized during that time frame 870 and the amount of the available communication bandwidth ~~880~~ that would remain available after the analyzed path has been allocated. The schedule covers various segments of the day as determined by the offsets selected 820 and also indicates a schedule of usage for the node for various days of the week. Once the user verifies that the utilization on all of the nodes on the path are within a desirable range, the user may select to return to the bandwidth allocation screen shown in Figure 7 and allocate the bandwidth 780.